REMARKS

Initially, in accordance with Applicant's duty to provide information regarding the substance of an interview, a telephonic interview was held between Applicant's representative and Examiner Al-Hashemi on October 30, 2007. Applicant would like to thank Examiner Al-Hashemi for the courtesies extended during the telephonic interview. During the interview, Examiner Al-Hashemi clarified that the rejection under claim 35 U.S.C. § 102(b) set forth on page 2 of the Office Action includes claims 35, 36, and 40-53 and is based on Mizutani et al., U.S. Patent No. 5,748,953 (Mizutani hereinafter) and not, as indicated, U.S. Patent No. 6,801,916 to Roberge et al. Examiner Al-Hashemi acknowledged that the Response to Arguments section of the Office Action set forth on page 5 incorrectly references subject matter disclosed in Roberge et al. and not in Mizutani et al. Examiner Al-Hashemi further clarified that the rejection of claims 37-39 and 54 under claim 35 U.S.C. § 103(a) set forth on page 4 of the Office Action is based on Mizutani et al. in view of de Hita et al., U.S. Patent No. 6,081,774 (de Hita et al. hereinafter). Examiner Al-Hashemi agreed to reconsider the rejections set forth in the non-final Office Action when presented in this Amendment. The rejections are respectfully traversed.[1] In addition, Examiner Al-Hashemi suggested the possibility of a need for a terminal disclaimer with respect to the previously presented claims in view of claims in U.S Patent No. 6,678,681.

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[1] As Applicant's remarks with respect to the Examiner's rejections overcome the rejections, Applicant's silence as to certain assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, assertions as to dependent claims, etc.) is not a concession by Applicant that such assertions are accurate or that such requirements have been met, and Applicant reserves the right to dispute these assertions/requirements in the future.

By this Amendment, Applicant amends claims 35, 38-41, and 44-49 to improve

form; cancels claims 42 and 50-54 without prejudice or disclaimer; and adds new claims

55-60. No new matter has been added. Claims 35-41, 43-49, and 55-60 are pending.

Rejection under 35 U.S.C. § 102 Based on Mizutani et al.

Pending claims 35, 36, 40, 41, and 43-49 stand rejected under 35 U.S.C. § 102(b)

as allegedly anticipated by Mizutani et al. The rejection is traversed.

A proper rejection under 35 U.S.C. § 102 requires that a single reference teach

every aspect of the claimed invention. Any feature not directly taught must be inherently

present. In other words, the identical invention must be shown in as complete detail as

contained in the claim. See M.P.E.P. § 2131. Mizutani et al. does not disclose or suggest

the combination of features recited in claims 35, 36, 40, 41, and 43-49.

Independent claim 35, as amended, recites a computer-implemented method

comprising identifying a first tuple that corresponds to target information in documents

stored in a database, the first tuple including a plurality of fields; finding occurrences of

the first tuple in the database; recognizing, based on the occurrences, a pattern in which

the target information occurs in the database, where the pattern and the first tuple differ;

and finding, based on the pattern, at least a second tuple in the database that corresponds

to the target information. This combination of features is not disclosed or suggested by

Mizutani et al.

For example, Mizutani et al. fails to disclose or suggest recognizing, based on

occurrences of a first tuple that corresponds to target information in documents stored in

a database, a pattern in which the target information occurs in the database, where the

pattern and the first tuple differ.

In rejecting claim 35, the Examiner points to column 6, lines 17-20 and 59-67; the

label, "SKIP PLURAL CHARACTER CONTITUENT," and element 105 in Fig. 8;

element 208 in Fig. 9; and column 5, lines 11-17 and 21-24 of Mizutani et al. as being

relevant to features of claim 35. (Office Action, pages 2-3). Applicant disagrees with the

Examiner's interpretation of Mizutani et al.

Column 6, lines 18-24 and 59-67 of Mizutani et al. discloses:

> In the document search method, at a skip plural-character string
> extraction step of the neighboring plural-character occurrence bitmap
> creation and registration process, n-character strings at every (m+1)-th
> character positions are extracted from text data, and appearance
> information of each n-character string is registered in the neighboring
> plural-character occurrence bitmap.
>
> * * *
>
> When the neighboring plural-character occurrence bitmap is created, at
> a character appearance frequency judgement step, it is judged from the
> results at the character appearance frequency calculation step whether the
> number of occurrence documents in which texts each neighboring plural-
> character string appears, is larger than a predetermined threshold value.
>
> If the occurrence document number is larger than the predetermined
> threshold value, at a bit list registration step.

These sections of Mizutani et al. disclose a search technique in which n-character strings

are extracted from text data and registered in a neighboring plural-character occurrence

bitmap, and recognizing whether a number of occurrence documents is greater than a

threshold. Nowhere in these sections, or elsewhere, does Mizutani et al. disclose or

suggest recognizing, based on occurrences of a first tuple that corresponds to target

information in documents stored in a database, a pattern in which the target information

occurs in the database, where the pattern and the first tuple differ, as required by claim 35.

Fig. 8 of Mizutani et al. is a diagram illustrating a method of forming a neighboring plural-character occurrence bitmap 105. (Mizutani et al., column 8, lines 25-27). The label, "SKIP PLURAL CHARACTER CONSTITUENT," in Fig. 8 appears to refer to an example of a portion of three-character strings extracted from DOCUMENT 1. (Mizutani et al., column 14, lines 21-24). Nowhere in this section, in connection with Fig. 8, or elsewhere, does Mizutani et al. disclose or suggest recognizing, based on occurrences of a first tuple that corresponds to target information in documents stored in a database, a pattern in which the target information occurs in the database, where the pattern and the first tuple differ, as required by claim 35. Instead, these portions of Mizutani et al. merely appear to disclose extracting substrings from documents.

Fig. 9 of Mizutani et al. is a problem analysis diagram illustrating a method of searching the neighboring plural-character occurrence bitmap. (Mizutani et al., column 14, lines 61-63). Applicant notes that Fig. 9 does not contain element 208, which is a hash table formation program shown in Fig. 1 of Mizutani et al., thus it is unclear as to what it is in Fig. 9 that the Examiner is alleging is relevant to features of claim 35. Accordingly, if the rejection is maintained, Applicant respectfully requests that the Examiner identify a specific feature(s) depicted in Fig. 9 upon which the Examiner is relying. Nevertheless, nowhere in connection with steps 1030-1033 of Fig. 9, does Mizutani et al. disclose or suggest recognizing, based on occurrences of a first tuple that corresponds to target information in documents stored in a database, a pattern in which

the target information occurs in the database, where the pattern and the first tuple differ,

as required by claim 35.

Mizutani et al., at col. 5, lines 11-24, discloses:

> It is another object of the present invention to realize a neighboring plural-character occurrence bitmap having less noises even if and when a word constituted by phonetic symbols such as English characters is designated as a search term, and to realize a neighboring plural-character occurrence bitmap for a large scale document database capable of suppressing search noises to be caused by hashing.
>
> * * *
>
> A document search method includes the steps of: extracting partial character strings in a predetermined format from documents stored in advance; forming a neighboring plural-character occurrence bitmap indicating whether each partial character string is contained in each document

This section of Mizutani et al. discloses that a document search method produces a

neighboring plural-character occurrence bitmap for a large scale document database

capable of suppressing search noises to be caused by hashing and having less noises

when a word constituted by phonetic symbols is designated as a search term. The

document search method includes extracting partial character strings in a predetermined

format from documents stored in advance; and forming a neighboring plural-character

occurrence bitmap indicating whether each partial character string is contained in each

document. Nothing in this section of Mizutani et al. or any other portion of Mizutani et

al. discloses or suggests recognizing, based on occurrences of a first tuple that

corresponds to target information in documents stored in a database, a pattern in which

the target information occurs in the database, where the pattern and the first tuple differ,

as required by claim 35.

In fact, the disclosure of Mizutani et al. does not even mention a "pattern," much less recognizing, based on occurrences of a first tuple that corresponds to target information in documents stored in a database, a pattern in which the target information occurs in the database, where the pattern and the first tuple differ, as required by claim 35.

Moreover, because Mizutani et al. fails to disclose or suggest recognizing, based on occurrences of a first tuple that corresponds to target information in documents stored in a database, a pattern in which the target information occurs in the database, where the pattern and the first tuple differ, Mizutani et al. cannot disclose or suggest finding, based on the pattern, at least a second tuple in the database that corresponds to the target information, as also recited in claim 35. In rejecting claim 41, the Examiner alleges that Mizutani et al. discloses "using the pattern to locate occurrences of additional sets of information," citing column 4, lines 43-49 of Mizutani et al. for support (Office Action, page 3). Applicant respectfully disagrees.

Mizutani et al., at column 4, lines 43-49, discloses:

> [I]n a large scale document search system registering a number of documents, documents not relevant to a search term cannot be discarded and a search reduction cannot be made properly, resulting in a lowered search performance. If all neighboring plural-character strings are assigned each entry to solve this problem, the capacity of the neighboring plural-character occurrence bitmap becomes very bulky and unpractical.

This section of Mizutani et al. discloses that if all neighboring plural-character strings are assigned each entry to solve problems associated with performing a search reduction in a large-scale document search system, the capacity of the neighboring plural-character occurrence bitmap becomes very unwieldly. Nowhere in this section, or elsewhere, does

Mizutani et al. disclose or suggest finding, based on the pattern, at least a second tuple in the database that corresponds to the target information, as recited in claim 35.

For at least these reasons, Applicant submits that Mizutani et al. does not disclose or suggest all of the features recited in claim 35, and the rejection of claim 35 should therefore be withdrawn.

Claims 36, 40, 41, 43 and 44 depend from claim 35 and are, therefore, not anticipated by Mizutani et al. for at least the reasons given for claim 35.

Independent claims 45 and 49 recite features similar to, yet possibly of different scope than, features recited in claim 35 and are, therefore, not anticipated by Mizutani et al. for at least reasons similar to the reasons given for claim 35.

Claims 46-48 depend from claim 45 and are, therefore, not anticipated by Mizutani et al. at least by virtue of their dependency from claim 45.

Rejection under 35 U.S.C. § 103 Based on Mizutani et al. and de Hita et al.

Pending claims 37-39 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Mizutani et al. in view of de Hita et al.

Claim 37-39 depend from claim 35. Without acquiescing in the rejection, Applicant respectfully submits that the disclosure of de Hita et al. does not cure the deficiencies in the disclosure of Mizutani et al. noted above with respect to claim 35. Claims 37-39 are, therefore, patentable over Mizutani et al. and de Hita et al., whether taken alone, or in any reasonable combination, for at least the reasons given for claim 35.

New Claims

New independent claim 55 recites a method comprising searching a plurality of documents in a database using a first one of a plurality of tuples that relate to target information, where the tuples include a plurality of fields; matching the fields of the first tuple to a data pattern corresponding to the target information in a first group of the plurality of documents; and identifying, based on the data pattern, a second one of the tuples in a second group of the plurality of documents. This combination of features is not disclosed by Mizutani et al. and de Hita et al., whether taken alone, or in any reasonable combination for at least the reasons given above with respect to claims 35-41 and 43-49. Therefore, claim 55 is believed to be patentable over Mizutani et al. and de Hita et al., whether taken alone, or in any reasonable combination

New claims 56-60 depend from claim 55 and are, therefore, patentable over Mizutani et al. and de Hita et al., whether taken alone, or in any reasonable combination, for at least the reasons given for claim 55.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests the Examiner's reconsideration of the application and the timely allowance of the pending claims.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise which could be eliminated through discussions with Applicant's representative, then

the Examiner is invited to contact the undersigned by telephone in order that the further

prosecution of this application can thereby be expedited.

    To the extent necessary, a petition for an extension of time under 37 C.F.R. §

1.136 is hereby made. Please charge any shortage in fees due in connection with the

filing of this paper, including extension of time fees, to Deposit Account No. 50-1070

and please credit any excess fees to such deposit account.

Respectfully submitted,

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